

Data Sheet

Customer: _____

Product: TO-220 Power Resistors – TR35 Series

Size: TR35

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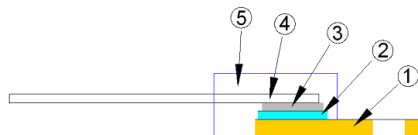
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TO-220 Power Resistors – TR35 Series



Construction



① Radiator Fin	④ Copper Lead
② Alumina Substrate	⑤ Molding
③ Resistor Layer	

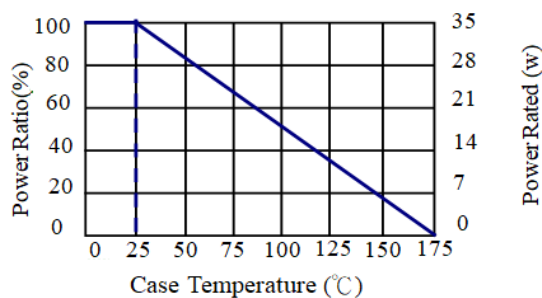
Features

- 35 watts at 25°C case temperature heat sink mounted
- TO-220 style power package
- Single screw mounting to heat sink
- Molded case for protection and easy to mount
- Electrically isolated case
- Non-Inductive design

Applications

- Switching Power Supplies
- Snubbers Circuits
- Automated Machine Controller
- RF Power Amplifiers
- Low Energy Pulse Loading
- UPS
- Voltage Regulation

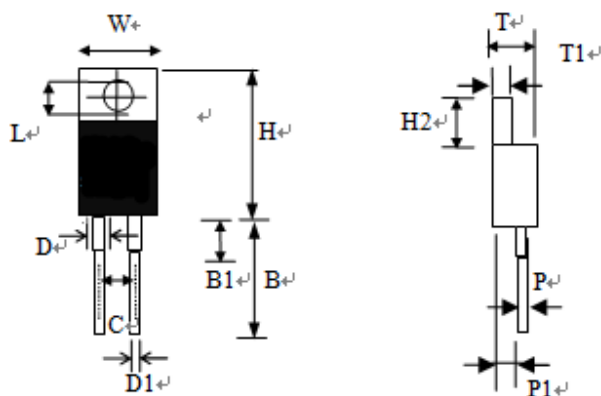
Derating Curve



Derating Curve Slope: 0.23W/ °K

Thermal Resistance: 4.28 °K/W

Dimensions



Unit: mm

Type	W	H	H1	B	B1	D	D1	C	L	T	T1	H2	P	P1	Packaging
															Tube
TR35	10.16 ±0.30	15.00 ±0.50	2.90 ±0.25	13.50 ±0.80	4.00 max	1.27 ±0.10	0.78 ±0.08	5.08 ±0.25	3.65 ±0.3	4.60 ±0.20	1.20 ±0.10	6.25 ±0.35	0.60 ±0.15	2.30 ±0.25	50 pcs

Part Numbering

TR	35	J	D	D	1001
Product Type	Power	Resistance Tolerance	Packaging Code	TCR (PPM/°C)	Resistance
	35: 35 Watts	D: $\pm 0.5\%$ F: $\pm 1\%$ J: $\pm 5\%$ K: $\pm 10\%$	D: Tube	D: ± 50 E: ± 100 F: ± 200 G: ± 300 - : No Specified ($\pm 300 \sim \pm 700$)	R100: 0.1Ω 0100: 10Ω 4700: 470Ω 1001: $1K\Omega$ 1002: $10K\Omega$

Electrical Characteristics Specifications

Item Type	Resistance Range				TCR (PPM/°C)
	±0.5%	±1%	±5%	±10%	
TR35	-	-	0.05Ω - 0.1Ω		No Specified (±300~±700)
	-	≧ 0.1Ω - 1Ω			±300
	-	≧ 1Ω - 5Ω			±100 ±200 ±300
	≧ 5Ω - 10Ω			±100 ±200 ±300	
	≧ 10Ω - 100KΩ			±50 ±100 ±200	

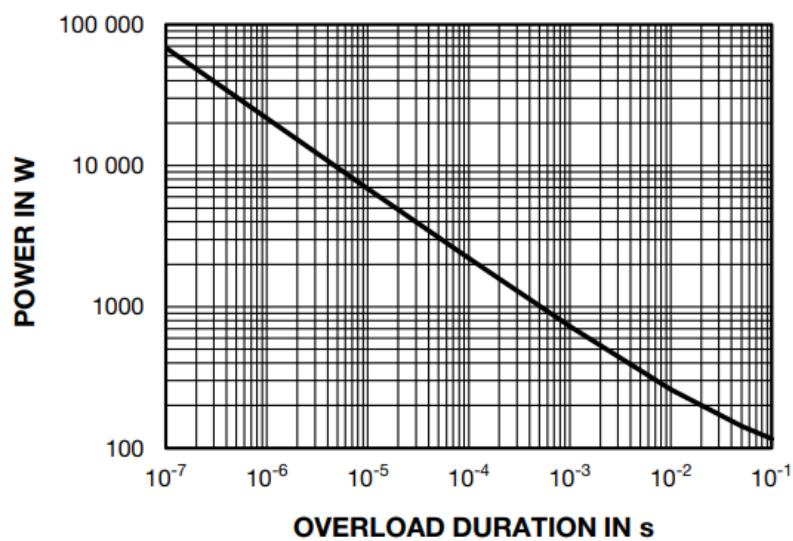
- Operating Voltage: 350V Max.
- Dielectric Strength: 1800VAC
- Insulation Resistance: $10G\Omega$ min.
- Operating Temperature Range: -55°C to $+175^\circ\text{C}$

Environmental Characteristics

Item	Requirement	Test Method
Temperature Coefficient of Resistance (T.C.R.)	As Spec.	Referenced to 25°C , ΔR taken at $+105^\circ\text{C}$
Short Time Overload	$\Delta R \pm 0.3\%$	2 times rated power with applied voltage not to exceed 1.5 times maximum continuous operating voltage for 5 seconds
Load Life	$\Delta R \pm 1.0\%$	2,000 hours at rated power
Damp Heat with Load	$\Delta R \pm 0.5\%$	$40 \pm 2^\circ\text{C}$, 90~95% R.H., RCWV for 1000 hrs with 1.5 hrs "ON" and 0.5 hr "OFF"
Solderability	90% min. coverage	$245 \pm 5^\circ\text{C}$ for 3 seconds
Thermal Shock	$\Delta R \pm 0.3\%$	$-65^\circ\text{C} \sim 150^\circ\text{C}$, 100 cycles
Terminal Strength	$\Delta R \pm 0.2\%$	(Pull Test) 2.4N
Vibration, High Frequency	$\Delta R \pm 0.2\%$	20g peak

- Lead Material: Tinned Copper
- Maximum Torque: 0.9 N·m
- Without a Heat Sink, When in Free Air at 25°C , the TR35 is Rated for 2.50W
- The Case Temperature is to be used for the Definition of the Applied Power Limit
- The Case Temperature Measurement must be made with a Thermocouple Contacting the Center of the Component mounted on the Designed Heat Sink.
- Thermal Grease should be Applied Properly.
- Storage Temperature: $25 \pm 5^\circ\text{C}$; Humidity: $< 75\% \text{RH}$
- Shelf life: 1 years Max

■ Power Curve



REVISION HISTORY

<u>REVISION</u>	<u>DATE</u>	<u>CHANGE NOTIFICATION</u>	<u>DESCRIPTION</u>
Version B9	Mar 31 ,2025		-Add Shelf life.
Version C	May 14 ,2025		-Modify the dimension L size. -Modify the TCR specification for 0.05Ω – 0.1Ω from No Specified to No Specified ($\pm 300 \sim \pm 700$). -Add Power Curve.